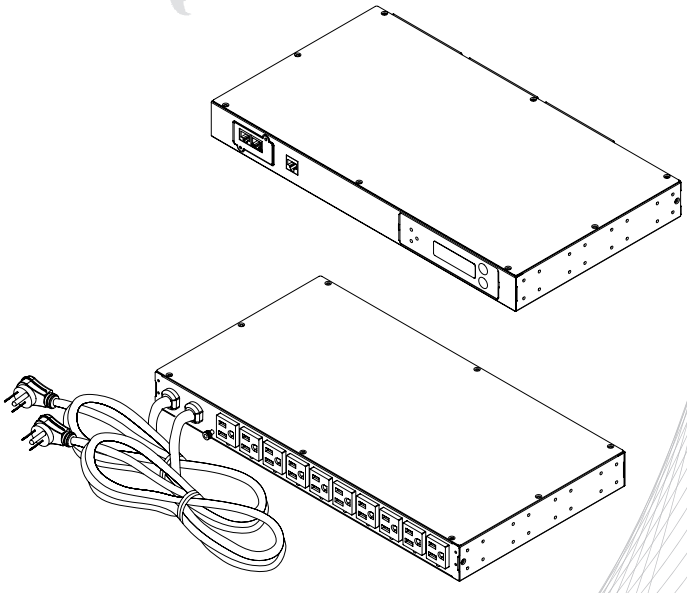
CyberPower®

Reliability. Quality. Value.

User Manual

Automatic Transfer Switch



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Overview

CyberPower Automatic Transfer Switches PDUs with dual input for power provide redundant and increased reliability for critical devices with a single power plug. Users can define the preferred input power source. When a selected source is unstable or unavailable, the ATS PDU will switch to the second power source to constantly provide power to connected devices. The entire ATS PDU series are designed with LED and LCD interfaces for users to easily observe power status and device load. On-site power management is accomplished as users can configure power settings, via LCD interface, according to local power condition. Available in both switched and metered/monitored configurations, users have a broad base of options to select the ATS PDU that best fits their needs.

Model List

Switched Series	Metered/Monitored Series
1U	1U
PDU15SW10ATNET	PDU15M10AT
PDU20SW10ATNET	PDU20M10AT
PDU20SWT10ATNET	PDU20MT10AT
PDU20SWHVT10ATNET	PDU20MHVT10AT
PDU15SWHVIEC12ATNET	PDU15MHVIEC12AT
PDU20SWHVIEC10ATNET	PDU20MHVIEC10AT
PDU20SWHVCEE10ATNET*	PDU20MHVCEE10AT*
2U	2U
PDU30SWT17ATNET	PDU30MT17AT
PDU30SWHVT19ATNET	PDU30MHVT19AT

*Selected models may not be available in certain regions. Please contact your CyberPower sales team for more information.

Safety Precautions

Read the following before installing or operating the Automatic Transfer Switches (ATS PDU):

- Use only the supplied hardware to attach the mounting brackets.
- The ATS PDU must be plugged into a single phase three-wire, grounded outlet on a circuit that is protected by a fuse or circuit breaker. For PDU15xxxxx series, please use 15A circuit protector. For PDU20xxxxx series, please use 20A circuit protector. For PDU30xxxxx series, please use 30A circuit protector. Connection to any other type of power outlet may result in a electrocution hazard.
- Do not use extension cords or adapters with these ATS PDUs.
- Never install an ATS PDU or associated wiring or equipment during a lightning storm.
- Ensure that the power cord, plug, and socket are in good condition.

To prevent the risk of fire or electrocution, this ATS PDU should be installed in a temperature and humidity controlled indoor area free of conductive contaminants. Do not install this ATS PDU where excessive moisture or heat is present.

Before using, please check to ensure the package contains all the items shown below. If there are missing parts, please contact your local CyberPower sales team for technical support.

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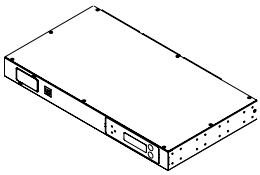
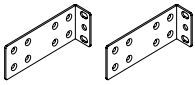
Product Contents

For 1U Series

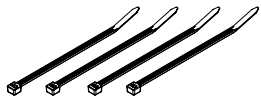


ATS PDU

2 (M3x4) Cord Retention Tray Mounting Screws

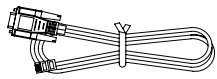


Mounting Bracket x 2

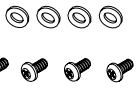


Cable Ties: Qty. 18 for 10 outlets, 21 for 12 outlets

24 (M4x8) Bracket Mounting Screws (Includes eight spares)

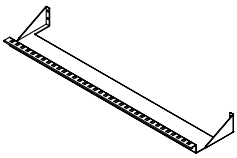


RJ45/DB9 Serial Port Connection Cable



6 (M5x12) Rack Mounting Screws/ 6 Washers (Includes two spares for each)

Jumper (Switched type only)



Cord Retention Tray

User Manual / Registration Card / CD

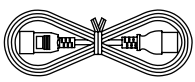
Below items only provided with IEC type ATS PDU

IEC Socket Power Cord Stand (2 for 10 outlets, 3 for 12 outlets)

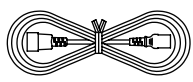
Power Cord Retention Cable Clip (18 for 10 outlets, 21 for 12 outlets)

(M3x4) Screws (15 for 10 outlets, 22 for 12 outlets)

Cable Tie (18 for 10 outlets, 21 for 12 outlets)



Power Cord 10 feet
IEC-320 C13/C14 x 2
(PDU15SWHVIEC12ATNET/ PDU15MHVIEC12AT Model Only)



Power Cord 10 feet
IEC-320 C19/C20 x 2
(PDU20SWHVIEC10ATNET/ PDU20MHVIEC10AT Model Only)

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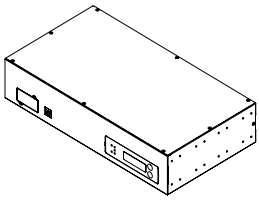
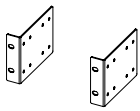
Product Contents

For 2U Series

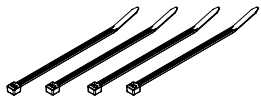


ATS PDU

4 (M3x4) Cord Retention Tray Mounting Screws

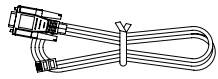


Mounting Bracket x 2



Cable Ties: Qty. 30

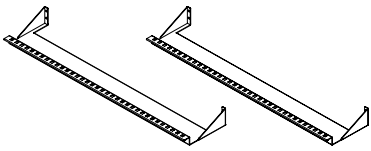
24 (M4x8) Bracket Mounting Screws
(Includes eight spares)



RJ45/DB9 Serial Port
Connection Cable

6 (M5x12) Rack Mounting Screws/
6 Washers (Includes two spares for each)

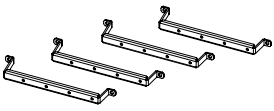
Jumper (Switched type only)



Cord Retention Tray X 2

User Manual / Registration Card / CD

Below items only provided with IEC type ATS



IEC Socket Power Cord Stand x 4

Power Cord Retention
Cable Clip x 27

29 (M3x4) Screws

Cable Tie x 27

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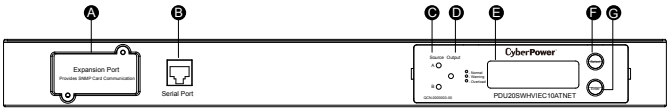
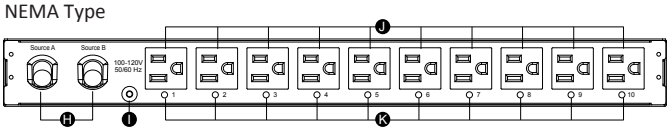
Product Features

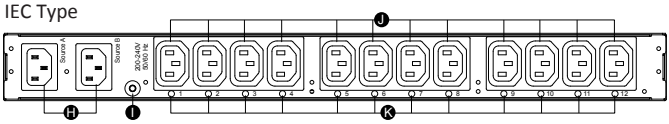
Front/Rear Panel Description (1U 15A series)



NEMA Type



IEC Type



A. SNMP/HTTP Network Slot
Allow users to remotely control and monitor the ATS PDU when installed with CyberPower's Remote Management Card.
B. Serial Port (RJ45 modular port)
Use serial port to connect with PC and execute local control of the ATS PDU.
C. Source Indicator
Indicates Source A or B is in use. When both sources are normal, selected source shows constant green LED while another source shows blinking green LED.
D. Output Indicator
Indicates load condition of the ATS PDU.
E. Multifunction LCD Readout
Display various ATS PDU information such as power and load conditions.
F. Select Button
Use to control the LCD display and toggle through the available informational options.
G.Enter Button
Use to choose selected items, enter to next level menu or return to previous menu.
H. AC Inlet/AC Power Cord
Use to connect ATS PDU to utility power or UPS.
I. Ground Stud
Use to ground the ATS PDU.
J. AC Output Receptacles
Provides power distribution for connected equipment.
K. Outlet Indicator (switched series only)
When the LED is on, the outlet is providing power to connected equipment.

Technical Specifications

	Switched Series		Metered Series	
Model Name	PDU15SW10ATNET	PDU15SWHVIEC12ATNET	PDU15M10AT	PDU15MHVIEC12AT
Input				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Frequency	50/60Hz			
Derated Input Current	12A	12A(UL)/10A(CE)	12A	12A(UL)/10A(CE)
Plug Type	(2) NEMA 5-15P	(2) IEC-320 C14	(2) NEMA 5-15P	(2) IEC-320 C14
Power Cord Type	SR (14 AWG)	Socket	SR (14 AWG)	Socket
Power Cord Length	10 ft/3.05 m			
Output				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Derated Output Current	12A	12A(UL)/10A(CE)	12A	12A(UL)/10A(CE)
Outlet Type	NEMA 5-15R	IEC-320 C13	NEMA 5-15R	IEC-320 C13
Outlet Number	10	12	10	12
Transfer Time	Typical: 8-12ms 16ms max @ 60Hz/ 18ms max @ 50Hz			
Management and Communications				
Multifunction LCD Readout	Voltage, Frequency, Load, Current, HW/FW Version, Network Information			
Software	PowerPanel® Business Edition			
SNMP/ HTTP Capable	Yes, with RMCARD203		Yes, with optional RMCARD202/203	
Connectivity	RJ45 (Serial Port)			
Sensor Capable	Optional			
Physical				
Dimension (W x H x D)	17.05" x 1.75" x 9.3"/433mm x 44mm x 236mm			
Environmental				
Humidity	0 to 95% Non-condensing			
Altitude	13100 ft/4000 m			
Temperature	32°F to 113°F/0°C to 45°C			
Safety Approvals				
Certifications	UL 60950-1 FCC Class A	UL 60950-1 CE, FCC Class A	UL 60950-1 FCC Class A	UL 60950-1 CE, FCC Class A

* All specifications are subject to change without notice.

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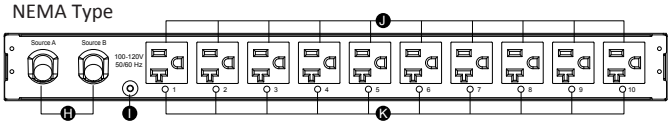
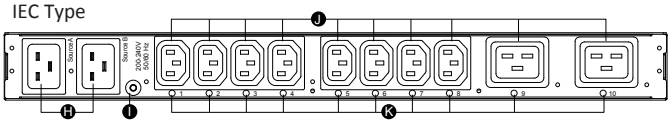
Product Features

Front/Rear Panel Description (1U 20A series)

NEMA Type



IEC Type



A. SNMP/HTTP Network Slot
   Allow users to remotely control and monitor the ATS PDU when installed with CyberPower's Remote Management Card.
B. Serial Port (RJ45 modular port)
   Use serial port to connect with PC and execute local control of the ATS PDU.
C. Source Indicator
   Indicates Source A or B is in use. When both sources are normal, selected source shows constant green LED while another source shows blinking green LED.
D. Output Indicator
   Indicates load condition of the ATS PDU.
E. Multifunction LCD Readout
   Display various ATS PDU information such as power and load conditions.
F. Select Button
   Use to control the LCD display and toggle through the available informational options.
G. Enter Button
   Use to choose selected items, enter to next level menu or return to previous menu.
H. AC Inlet/AC Power Cord
   Use to connect ATS PDU to utility power or UPS.
I. Ground Stud
   Use to ground the ATS PDU.
J. AC Output Receptacles
   Provides power distribution for connected equipment.
K. Outlet Indicator (switched series only)
   When the LED is on, the outlet is providing power to connected equipment.

Technical Specifications

	Switched Series		Metered Series	
Model Name	PDU20SW10ATNET PDU20SWT10ATNET	PDU20SWHVT10ATNET	PDU20M10AT PDU20MT10AT	PDU20MHVT10AT
		PDU20SWHVCEE10ATNET		PDU20MHVCEE10AT
		PDU20SWHVIEC10ATNET		PDU20MHVIEC10AT
Input				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Frequency	50/60Hz			
Derated Input Current	16A			
Plug Type	(2) NEMA 5-20P (2) NEMA L5-20P	(2) NEMA L6-20P (2) IEC 309 16A (2) IEC-320 C20	(2) NEMA 5-20P (2) NEMA L5-20P	(2) NEMA L6-20P (2) IEC 309 16A (2) IEC-320 C20
Power Cord Type	SR (12AWG)	SR (12AWG)	SR (12 AWG)	SR (12AWG)
		Socket		Socket
Power Cord Length	10 ft/3.05 m			
Output				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Derated Output Current	16A	C13: 12A (UL) 10A (CE) C19: 16A	16A	C13: 12A (UL) 10A (CE) C19: 16A
Outlet Type	NEMA 5-20R	(8) IEC C13/ (2) IEC C19	NEMA 5-20R	(8) IEC C13/ (2) IEC C19
Outlet Number	10	8+2	10	8+2
Transfer Time	Typical: 8-12ms 16ms max @ 60Hz/ 18ms max @ 50Hz			
Management and Communications				
Multifunction LCD Readout	Voltage, Frequency, Load, Current, HW/FW Version, Network Information			
Software	PowerPanel® Business Edition			
SNMP/ HTTP Capable	Yes, with RMCARD203		Yes, with optional RMCARD202/203	
Connectivity	RJ45 (Serial Port)			
Sensor Capable	Optional			
Physical				
Dimension (W x H x D)	17.05" x 1.75" x 9.3"/433mm x 44mm x 236mm			
Environmental				
Humidity	0 to 95% Non-condensing			
Altitude	13100 ft/4000 m			
Temperature	32°F to 113°F/0°C to 45°C			
Safety Approvals				
Certifications	UL 60950-1 FCC Class A	UL 60950-1 FCC Class A	UL 60950-1 FCC Class A	UL 60950-1 FCC Class A
		UL 60950-1 CE, FCC Class A		UL 60950-1 CE, FCC Class A

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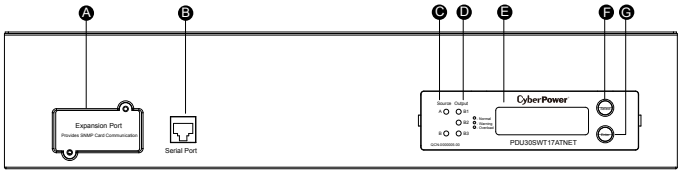
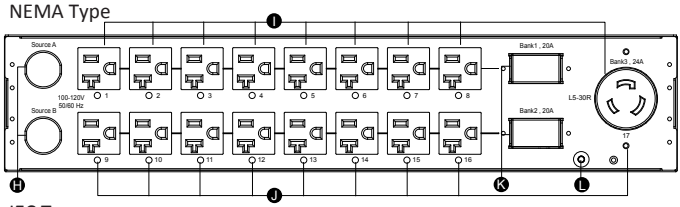
Product Features

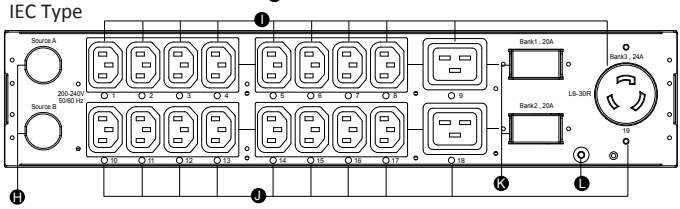
Front/Rear Panel Description (2U series)



NEMA Type



IEC Type



A. SNMP/HTTP Network Slot
Allow users to remotely control and monitor the ATS PDU when installed with CyberPower's Remote Management Card.
B. Serial Port (RJ45 modular port)
Use serial port to connect with PC and execute local control of the ATS PDU.
C. Source Indicator
Indicates Source A or B is in use. When both sources are normal, selected source shows constant green LED while another source shows blinking green LED.
D. Output Indicator
Indicates load condition of the ATS PDU.
E. Multifunction LCD Readout
Display various ATS PDU information such as power and load conditions.
F. Select Button
Use to control the LCD display and toggle through the available informational options.
G. Enter Button
Use to choose selected items, enter to next level menu or return to previous menu.
H. AC Inlet/AC Power Cord
Use to connect ATS PDU to utility power or UPS.
I. AC Output Receptacles
Provides power distribution for connected equipment.
J. Outlet Indicator (switched series only)
When the LED is on, the outlet is providing power to connected equipment.
K. Circuit Breaker
Provides output overload protection.
L. Ground Stud
Use to ground the ATS PDU.

Technical Specifications

	Switched Series		Metered Series	
Model Name	PDU30SWT17ATNET	PDU30SWHVT19ATNET	PDU30MT17AT	PDU30MHVT19AT
Input				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Frequency	50/60Hz			
Derated Input Current	24A			
Plug Type	(2) NEMA L5-30P	(2) NEMA L6-30P	(2) NEMA L5-30P	(2) NEMA L6-30P
Power Cord Type	SR (10 AWG)			
Power Cord Length	10 ft/3.05 m			
Output				
Nominal Voltage	100-120V	200-240V	100-120V	200-240V
Derated Output Current	5-20R: 16A L5-30R: 24A	C13: 12A C19: 16A L6-30R: 24A	5-20R: 16A L5-30R: 24A	C13: 12A C19: 16A L6-30R: 24A
Derated Output Current (each bank)	20A			
Bank Number	2			
Outlet Type	(16) NEMA 5-20R (1) NEMA L5-30R	(16) IEC C13 (2) IEC C19 (1) NEMA L6-30R	(16) NEMA 5-20R (1) NEMA L5-30R	(16) IEC C13 (2) IEC C19 (1) NEMA L6-30R
Outlet Number	17	19	17	19
Circuit Breaker	Yes			
Transfer Time	Typical: 8-12ms 16ms max @ 60Hz/ 18ms max @ 50Hz			
Management and Communications				
Multifunction LCD Readout	Voltage, Frequency, Load, Current, HW/FW Version, Network Information			
Software	PowerPanel® Business Edition			
SNMP/ HTTP Capable	Yes, with RMCARD203		Yes, with optional RMCARD202/203	
Connectivity	RJ45 (Serial Port)			
Sensor Capable	Optional			
Physical				
Dimension (W x H x D)	17.05" x 3.5" x 9.3"/433mm x 88mm x 236mm			
Environmental				
Humidity	0 to 95% Non-condensing			
Altitude	13100 ft/4000 m			
Temperature	32°F to 113°F/0°C to 45°C			
Safety Approvals				
Certifications	UL 60950-1, FCC Class A			

* All specifications are subject to change without notice.

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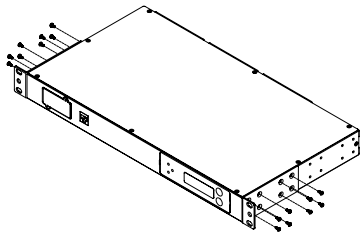
Installation Guide

CAUTION!! Please only use the provided screws for the entire installation process.

For 1U Series

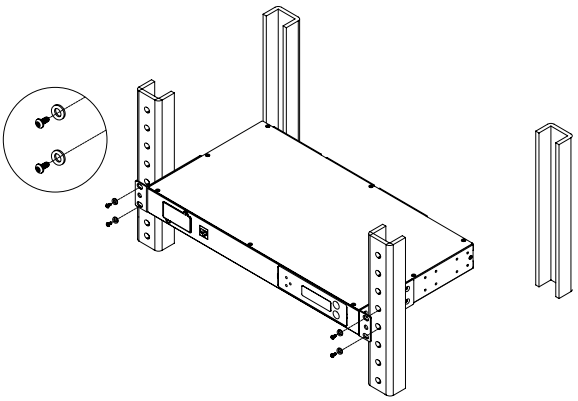
Step 1. Mounting Bracket Installation

Use the Mounting Bracket Screws (16) provided to attach the Mounting Brackets (2) to the ATS PDU.



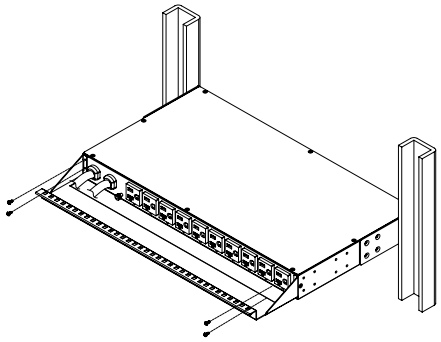
Step 2. ATS PDU Mounting

Use the Washers (4) and Screws (4) provided to secure the ATS PDU to your existing rack system.

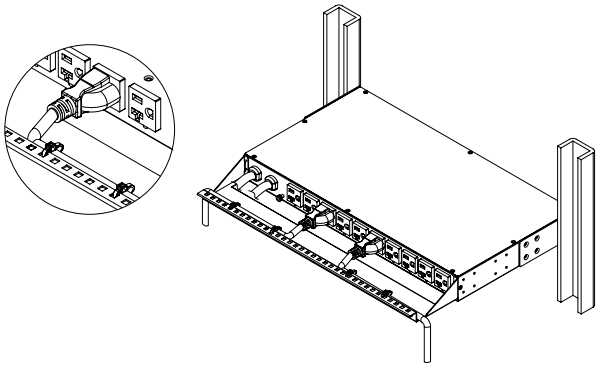


Step 3: Cord Retention Tray Installation (optional)

Attach the Cord Retention Tray to the ATS PDU with the 4 Cord Retention Tray Mounting that are provided.



Use the Cable Ties provided to fasten each power cord to the Cord Retention Tray.



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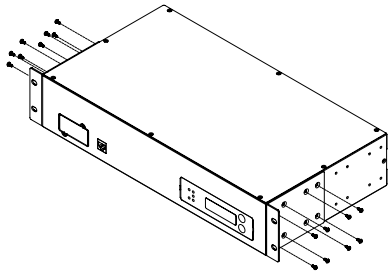
Installation Guide

For 2U Series

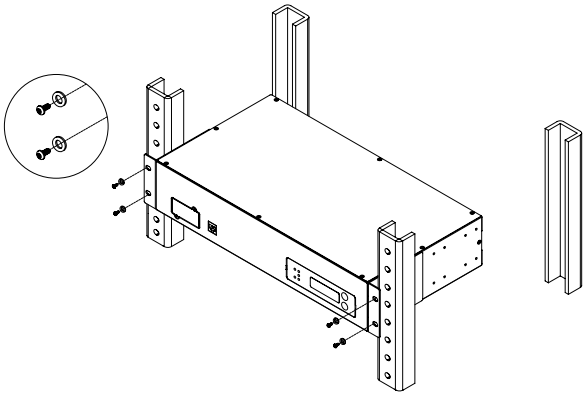
Step 1. Mounting Bracket Installation

Use the Mounting Bracket Screws (16) provided to attach the Mounting Brackets (2) to the ATS PDU.



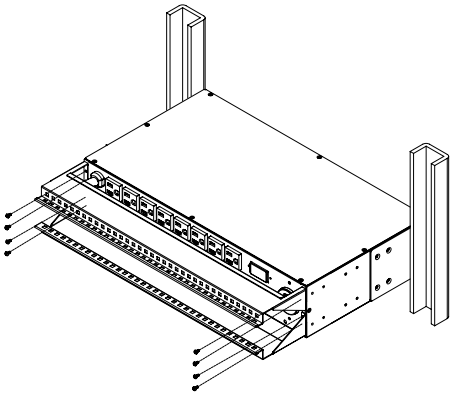
Step 2. ATS PDU Mounting

Use the Washers (4) and Screws (4) provided to secure the ATS PDU to your existing rack system.

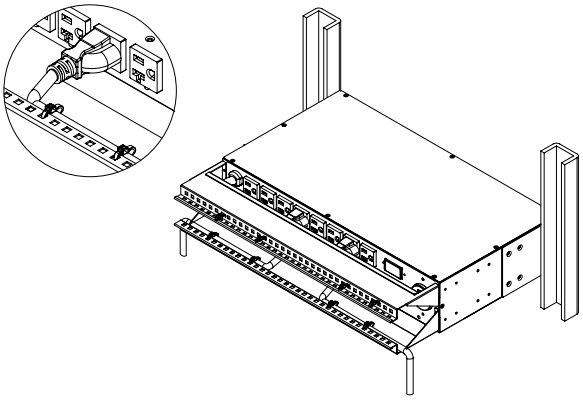


Step 3. Cord Retention Tray Installation (optional)

Attach the Cord Retention Tray to the ATS PDU with the 8 Cord Retention Tray Mounting Screws provided.



Use the Cable Ties provided to fasten each power cord to the Cord Retention Tray.



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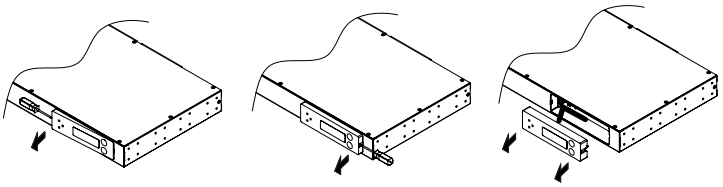
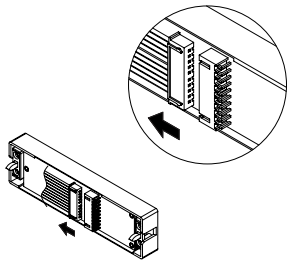
Installation Guide

Replacing the LCD Panel

Step 1. Use a slotted screwdriver to gently lift out the LCD panel.



Step 2. Disconnect the cable connector.



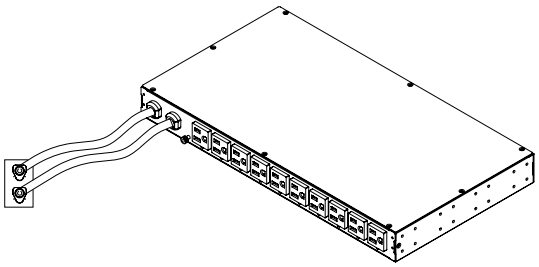
Electrical Installation

Step 1. Receptacle evaluation

Ensure that the plug type of your ATS PDU unit matches the receptacles that you are using.

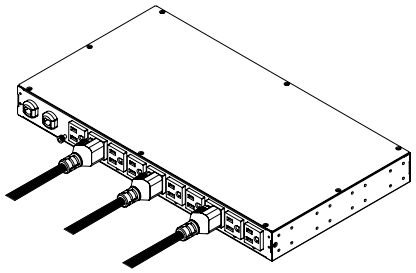
CAUTION!! The ATS PDU must be plugged into a three-wire, grounded utility receptacle or a UPS that is connected to a grounded utility receptacle. The utility receptacle must also be connected to an appropriate branch circuit/main with fuse or circuit breaker protection. Connection to any other type of receptacle may result in an electrocution hazard.

Step 2. Plug the ATS PDU into the utility receptacle and/or UPS.



Step 3. Attach equipment

It is extremely important not to exceed the ATS PDU's maximum current load (as outlined in the Specifications section). In order to determine total load, use the LCD diaplay on the front of the ATS PDU to monitor the load being attached.



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Installation Guide

Network Installation

(Performed when a Remote Management Card is installed)

Step 1. Attach the LAN Cable

Using a CAT5 RJ45 cable, attach one end to the Ethernet port on the RMCard, and the other end to a network port.

Step 2. Establish the ATS PDU IP address

Assigning an IP address to the CyberPower ATS PDU requires the user to have an available IP address that is valid on the respective network. If an available IP address is unknown, contact the network administrator to obtain one. The default IP is 192.168.20.177 and the default for the DHCP function is on.

There are multiple methods for setting up the IP address of the ATS PDU. Please follow the instructions below for the method that is appropriate for your application.

Please make sure the ATS PDU is powered on during this process.

Option 1 (recommended): Power Device Network Utility

1. Use the included "Software Installation CD" to install the Power Device Network Utility program.
2. Open the Power Device Network Utility software (Start => Power Device Network Utility).
3. Highlight the ATS PDU device from the list and select Edit and Setup device =>Assisted Setup from the menu.
4. Configure the IP Address, Subnet Mask, and Gateway Address to match your network settings.
5. Enter the user name and password of the ATS PDU device at the Authentication menu.

Note : The default username is "**cyber**" and the default password is "**cyber**".
For further information and installation instructions, see Appendix B.

Option 2: DHCP Server

1. Ask your administrator if there is DHCP server on the LAN.
2. Make sure the DHCP is Enabled.
3. Make sure the network connection is ready and power on the ATS PDU.
4. The ATS PDU will obtain an IP address from the DHCP server automatically.

Option 3: Address Resolution Protocol (ARP) Command

1. Obtain the MAC address from the sticker on the ATS PDU.
2. Open a command prompt as an administrator and type the following:
   "arp -s [available IP address] [MAC address of ATS]".
   Example: arp -s 192.168.20.240 00-0C-15-00-00-01
   IP Address MAC Address
3. Use the Ping command to assign a size of 123 bytes to the IP.
   * Type in "ping 192.168.20.240 -l 123" then press Enter
   * If the replies are received, your computer can communicate with the IP address

Option 4: Hyper Terminal or Terminal Emulator

In order for Hyper Terminal to interface with the ATS PDU, the PC/server must be connected directly to the ATS PDU via the serial port.

1. Use the included RJ45/DB9 serial port connection cable, attach one end to the serial port on the front of the ATS PDU, and the other end to the PC/server.
2. Open the Hyper Terminal software on your PC and select a name and icon for the connection.
3. Setup the COM port settings using the following values
   * Bits per second: 38400
   * Data bits: 8
   * Parity: None
   * Stop bits: 1
   * Flow control: None
4. Press Enter to enter the Authentication menu.
5. Enter the user name and password of the ATS PDU device at the Authentication menu.

Note: The default username is "**cyber**" and the default password is "**cyber**".
For further information and configuration via Hyper Terminal, see Appendix A-Hyper Terminal.

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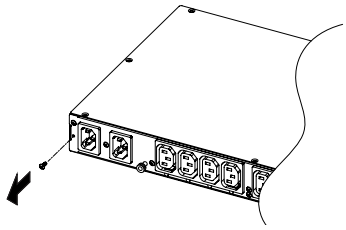
Installation Guide

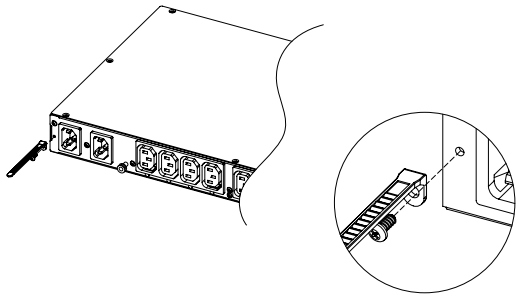
Power Cord Retention Clip Installation- For IEC type ATS PDU

Input Power Cord Retention Cable Clip Installation

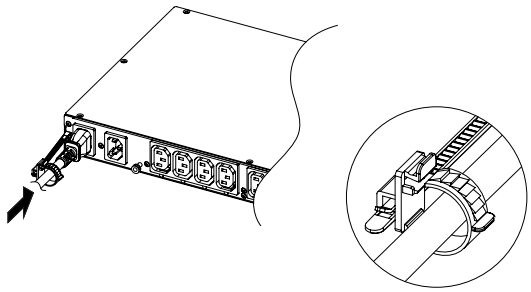
Step 1. Remove the screw next to the inlet.



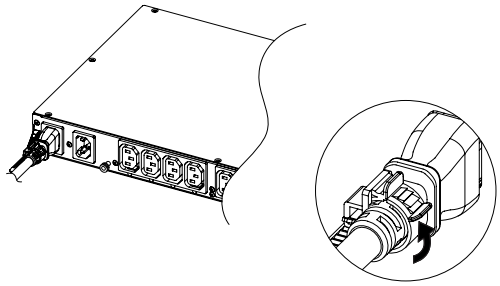
Step 2. Attach the Cable Tie on the ATS PDU and secure it with the screw removed in the previous step.



Step 3. Place a Power Cord Retention Cable Clip on the power cord. Align and insert the Cable Tie into the Cable Clip as shown in the figure below.



Step 4. Push the Power Cord Retention Cable Clip until it touches the plug and fasten the Retention Cable Clip like the figure below.



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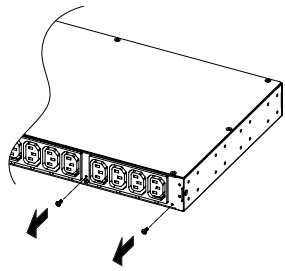
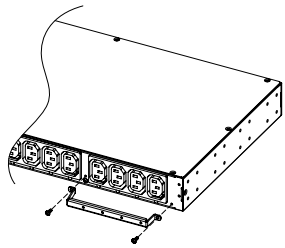
Power Cord Retention Clip Installation

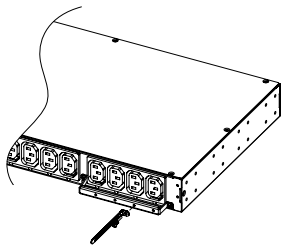
Step 1. Remove the screws next to the outlet where IEC Socket Power Cord Stand will be installed.



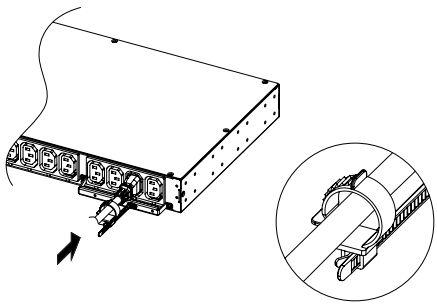
Step 2. Attach the IEC Socket Power Cord Stand on the ATS PDU and secure it with the screws removed in the previous step.



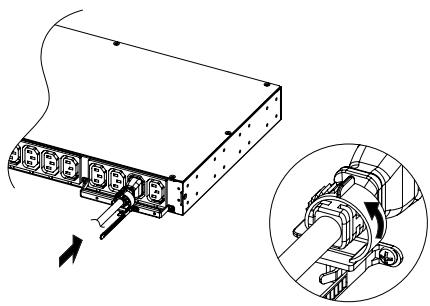
Step 3. Attach Cable Tie on the IEC Socket Power Cord Stand and secure it with the provided screw.



Step 4. Place a Power Cord Retention Cable Clip on the power cord. Align and Insert the Cable Tie into the Cable Clip as shown in the figure below.



Step 5. Push the Power Cord Retention Cable Clip until it touches the plug and fasten the Retention Cable Clip like the figure below.



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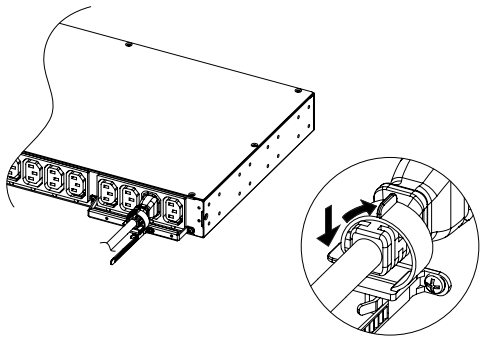
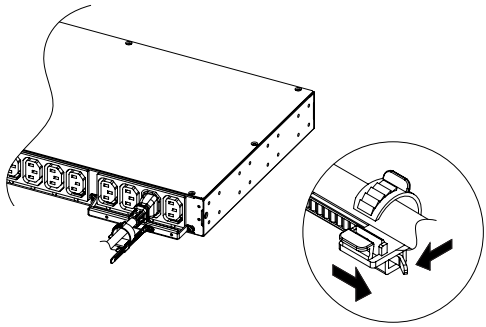
Removing the Power Cord Retention Clip

Step 1. Remove the Power Cord Retention Clip by pushing it to the right as shown in the figure below.



Step 2. Remove the Power Cord Retention Clip by pulling the clip (show in the image below) to the left.



Operation

Remote Management

The remote management function provides for monitoring of the ATS PDU operational information, controlling outlets and utilizing SNMP functionality.

Web

Remote management can be performed via web interface. To access the web interface, please follow the instructions below:

1. Enter the IP address of the ATS PDU into a web browser (Internet Explorer, Firefox).
2. Enter the user name and password of the ATS PDU device at the authentication screen.

Note: The default username is "**cyber**" and the default password is "**cyber**". For additional information about the features and functionality of CyberPower Management Console, please refer to the software Installation CD.

Telnet and SSH

The CyberPower ATS PDU provides Telnet and Secure Shell (SSH) as Remote Management methods. Telnet uses user name and password as basic security while SSH has a higher security level with encryption of the transmitted packets including user name, password, and data. Configure the Setting of Telnet and SSH on the Web Interface. The default user name and password is cyber/cyber.

SNMP

The CyberPower ATS PDU supports SNMPv1 and SNMPv3 Remote Management protocols. Download the CyberPower MIB file and add it to a SNMP-supporting management software. Default read/write community is public/privated for SNMPv1. SNMPv3 provides a higher security level than SNMPv1 by encrypting the transmitted packet. Configure the settings of the SNMPv1/SNMPv3 on Web Interface .

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Operation

Local Management

LCD Operation

The LCD display provides instant information, such as source condition, voltage and current, for the ATS PDU. In addition, users can use the interface to configure each PDU parameters and control each outlet on the switched ATS PDU.

A. Scroll Mode: The ATS PDU information will display in following order automatically when “Scroll Mode On” is configured.

Source A information
Source B information
Device Load
Bank 1 Current (2U series)
Bank 2 Current (2U series)
Bank 3 Current (2U series)
Environment Status (Displays when the ENVIROSENSOR is connected)

B. Main Menu Map

About	Hardware Version
	Firmware Version
	Network Information
	Serial Number

Settings	Preferred Source	A/B/None		
	Source Configuration	Nominal Voltage		
		Voltage Range		
		Freq. Deviation		
		Sensitivity		
	Load Configuration	Device Bank/1/2/3	Overload Threshold	
			Near Overload Threshold	
			Low Load Threshold	
	Outlet Control	Device Bank/1/2/3	All/Outlet 1-N	Immediate On
				Delay On
				Immediate Off
				Delay Off
				Reboot
				Delay Reboot
	LCD Settings	Brightness		
		Scroll Mode		
		Screen Off		

Reset/Reboot	Reset All (ATS PDU, RMCARD and LCD)
	Reset Except TCP/IP
	Reset Account (User Name and Password)
	Reboot

LED Indicators

Indicator	Status	Description
Source	Solid Green	Selected source and power condition is normal.
	Flashing Green	Bankup source and power condition is normal.
	Orange	Power condition is abnormal.
Load	Green	The aggregate current of each bank is normal.
	Orange	Near overload.
	Red	Overload.
Tx/Rx	Off	The ATS PDU power is off.
	On (Green)	The ATS PDU power is on.
	Flashing	Receiving/transmitting data packet.
		Reset finished.
LINK	On	Indicates the ATS PDU is connected to the LAN.
	Off	Indicates the ATS PDU is not connected to the LAN.
Outlet	On	The outlet is on and providing power.
	Off	The outlet is off.

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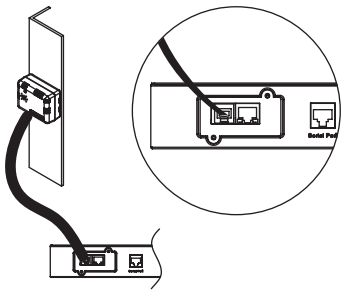
Operation

Environmental Monitoring (optional)

The CyberPower ATS PDU with an environment sensor (ENVIROSENSOR) installed, provides remote temperature and humidity monitoring in a server closet and/or datacenter. To connect ATS PDU with ENVIROSENSOR, use RJ45 Ethernet Cable included with the ENVIROSENSOR. Plug one end into the Environmental port on the RMCARD and the other end into the RJ45 port on the ENVIROSENSOR (as shown in figures below). When the ATS PDU connected correctly to the ENVIROSENSOR, users can see the temperature and humidity data with the Web Interface. For further information regarding ENVIROSENSOR configuration please refer to the Software Installation CD.



Device Reset

- To reset all the settings to default locally, use Reset function in the LCD display.
- To reset all the settings to default remotely, log in Web interface, enter the Reset page and apply the function.

Unattended/Automatic Shutdown

PowerPanel Business Edition software automatically intitiates a graceful shutdown on the operating system in an orderly fashion.
PowerPanel must be installed on every computer or server for which the shut down is to take place. The computer will receive an SNMP message from the ATS PDU and will perform the shut down according to the instructions provided, including shut downs at exact time and dates.
Follow the directions below for setting up Unattended/Automatic Shutdown.

Step 1. PC Configuration

1. Install PowerPanel Business Edition Client on every computer/server that will be part of the shut down process (Follow the instructions in the PowerPanel Business Edition Client user manual).
2. Configure the settings in PowerPanel Business Edition Client. See the PowerPanel Business Edition Client User Manual for additional help.

Step 2. ATS PDU Configuration

Verify that the IP address of all computers, that will be part of the shut down process, are included in the Client List of the web interface (For additional information, please refer to the user manual in the Software Installation CD).

Step 3. Notification

Notifying the computers of potential outlet shutdowns can be accomplished using the following methods:

- Outlets Control Menu: Performing the task of turning off or rebooting outlets
- Scheduling Menu: Setting the application to perform the task of turning off or rebooting outlets. The notification will occur prior to the scheduled date/time.
- Outlet Overload: In the event of ATS PDU overload, notification will be sent prior to the ATS PDU shutting down.

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Firmware Upgrade

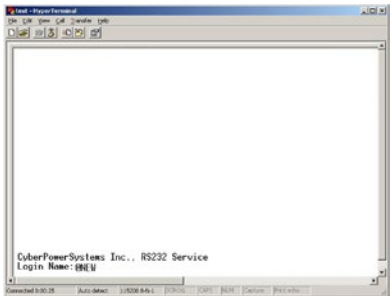
By upgrading the Firmware, you can obtain new features, updates and improvements to existing functionality.

ATS PDU

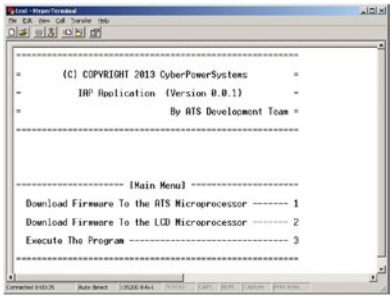
Update the following file to upgrade the firmware
- cpsatsmafw_xxx.bin

Note that the XXX is not part of the file name but is where the version number in the filename is given.

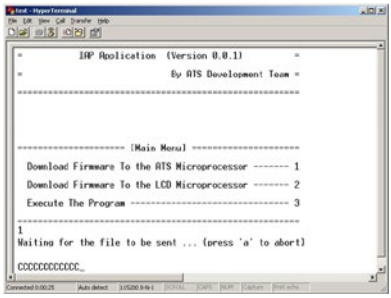
Use the following steps to upgrade the firmware.
1. Download the latest firmware from cpsww.com
2. Extract the file to “C:\”
3. Open Hyper Terminal to connect the ATS PDU and use the command “@NEW”



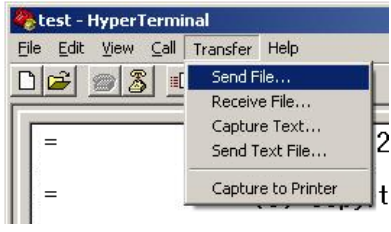
4. The ATS PDU will reboot and show main menu on Hyperterminal.


(C) COPYRIGHT 2013 CyberPowerSystems
IAP Application (Version 0.0.1)
By ATS Development Team
[Main Menu]
Download Firmware To the ATS Microprocessor ------- 1
Download Firmware To the LCD Microprocessor ------- 2
Execute The Program ------------------------------- 3

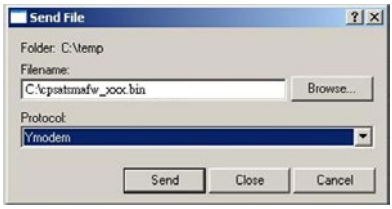
5. Press “1” to select ATS PDU upgrade


IAP Application (Version 0.0.1)
By ATS Development Team
[Main Menu]
Download Firmware To the ATS Microprocessor ------- 1
Download Firmware To the LCD Microprocessor ------- 2
Execute The Program ------------------------------- 3
1
Waiting for the file to be sent ... (press 'a' to abort)
CCCCCCCCCCC

6. Select Transfer > Send File



7. Note that the Ymodem protocol and file “C:\cpsatsmafw_xxx.bin” are selected in Hyperterminal



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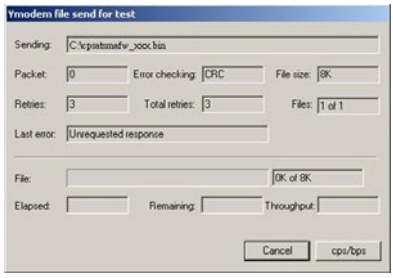
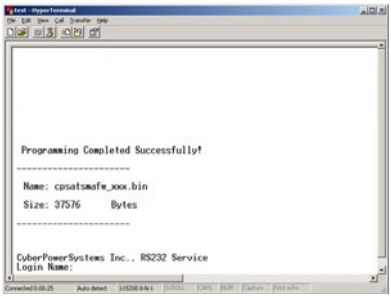
Firmware Upgrade

8. The download progress window will open after you click the Send button



9. After uploading the binary file Hyperterminal will show as below



LCD

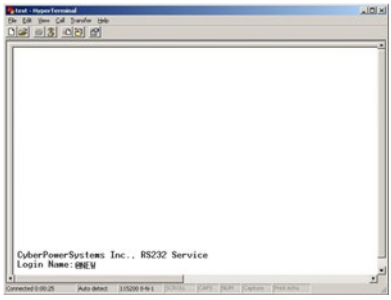
Update the following file to upgrade the firmware

- cpsatslafw_xxx.bin

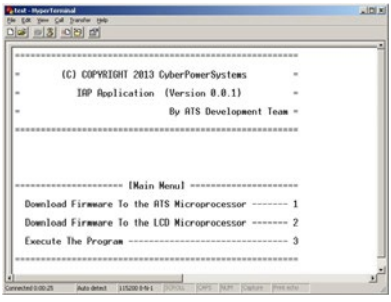
Note that the XXX is not part of the file name but is where the version number in the filename is given.

Use the following steps to upgrade the firmware.

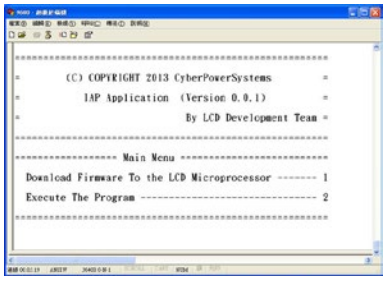
1. Download the latest firmware from cpsww.com
2. Extract the file to “C:\”
3. Open Hyper Terminal to connect the ATS PDU and use the command “@NEW”



4. The ATS PDU will reboot and show main menu on Hyperterminal


(C) COPYRIGHT 2013 CyberPowerSystems
IAP Application (Version 0.0.1)
By ATS Development Team
[Main Menu]
Download Firmware To the ATS Microprocessor ------- 1
Download Firmware To the LCD Microprocessor ------- 2
Execute The Program ------------------------------- 3

5. Press “2” to select LCD upgrade


(C) COPYRIGHT 2013 CyberPowerSystems
IAP Application (Version 0.0.1)
By LCD Development Team
Main Menu
Download Firmware To the LCD Microprocessor ------- 1
Execute The Program ------------------------------- 2

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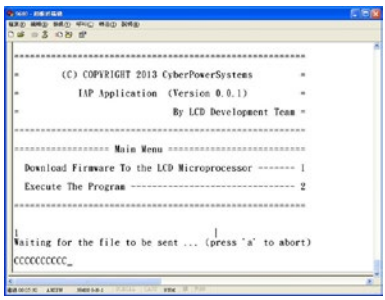
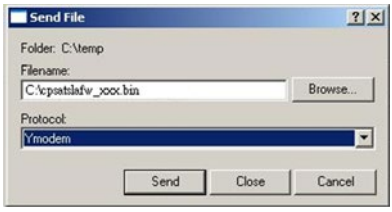
Firmware Upgrade

6. Press “1”

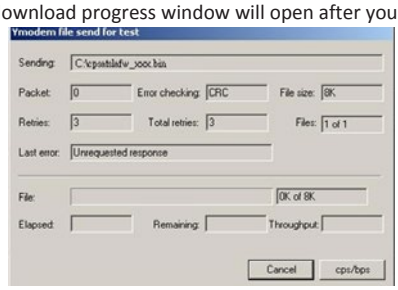

(C) COPYRIGHT 2013 CyberPowerSystems
IAP Application (Version 0.0.1)
By LCD Development Team
Main Menu
Download Firmware To the LCD Microprocessor ------- 1
Execute The Program ------------------------------ 2
Waiting for the file to be sent ... (press 'a' to abort)
CCCCCCCCC

7. Select Transfer > Send File

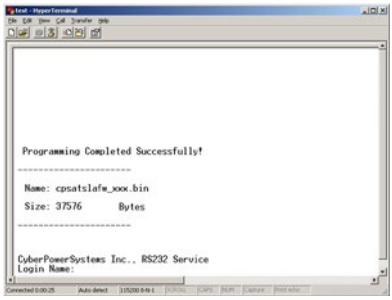
8. Note that the Ymodem protocol and file “C:\cpsatslafw_xxx.bin” are selected in Hyperterminal



9 The download progress window will open after you click the Send button



10. After uploading the binary file, Hyperterminal will be shown as below



You can see if the firmware upgrade is successful by checking the “CyberPower System Firmware Version” after login.

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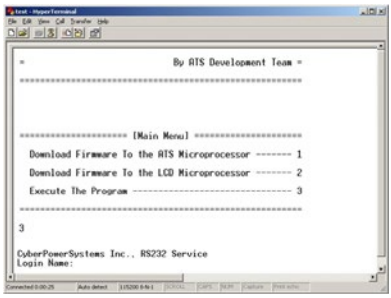
Firmware Upgrade

Note :

1. Please do not turn the ATS PDU off and ensure the quality of selected source power when processing firmware upgrade. The ATS PDU will not perform the ATS function when upgrading firmware.
2. Press “3” to exit the main menu of firmware upgrade.


By ATS Development Team
[Main Menu]
Download Firmware To the ATS Microprocessor ------- 1
Download Firmware To the LCD Microprocessor ------- 2
Execute The Program ------------------------------- 3
3
CyberPowerSystems Inc.. RS232 Service
Login Name:

RMCARD

There are two files to update in order to upgrade the firmware:

- cpssnmpfw_XXX.bin
- cpssnmpdata_XXX.bin

Note that the XXX is not part of the file name but is where the version number in the filename is given.

Use the following steps to upgrade the firmware.

1. Download the latest firmware from cpsww.com
2. Extract the file to “C:\”
3. Open a command prompt window and navigate to “C:\”
4. Login to the Remote Management Card with FTP command, type
   - ftp (after entering ftp mode, ftp> will display in the command prompt as shown below instead of C:\ )
   - ftp> open
   - To [current IP of the RMCARD] [port] (for example: To 192.168.22.126 21 [21 is the default ftp port for the RMCARD])
   - Input USER NAME and PASSWORD (same as the administrator account in Web interface default: cyber ; cyber)
5. Upload the cpssnmpfw_XXX.bin, type
   - ftp > bin
   - ftp > put cpssnmpfw _XXX.bin
6. Upgrade complete, type
   - ftp > quit7. The system will reboot after you type “quit”. This reboot will take approx. 30 seconds
8. Login to the FTP again
   - ftp
   - ftp> open
   - To [current IP of the RMCARD] [port] (for example: To 192.168.22.126 21) [21 is the default ftp port for theRMCARD])
   - Input USER NAME and PASSWORD
9. Upload cpssnmpdata _XXX.bin
   - ftp > bin
   - ftp > put cpssnmpdata _XXX.bin
10. Upgrade complete , type
    - ftp > quit
11. The system will reboot after you type “quit”

Troubleshooting

Problem	Possible Cause	Solution
ATS PDU outlets do not provide power to connected equipment	1. Breaker tripped 2. Power cord is not properly plugged in	Reset Breaker, check the plug to insure its connected correctly. If the problem remains, contact technical support.
Amperage displayed on LCD Display exceeds the units capability	Overload	The load indicator shows red when overload. Reduce the load on the ATS PDU until the overload is gone. If the problem remains, contact technical support.
Circuit breakers have tripped	1. Sustained overload 2. Excessive ambient or internal temperatures 3. Faulty breaker	Reset Breaker. If the problem remains, contact technical support.

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Conformance Approvals

FCC Warning
WARNING!! This equipment has been tested and found to comply with the limits for a Class A Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Any special accessories needed for compliance must be specified in the instruction.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: (1) An unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord by used. (2) Use only shielded cables to connect I/O devices to this equipment.
Note: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

The Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.
Cet appareil numerique de la class A respecte toutes les exigencies du Reglement sur le materiel brouilleur du Canada.

Customer Service & Warranty

Product Registration
Thank you for purchasing a CyberPower product. Prompt product registration entitles coverage under the Limited Warranty and also allows the opportunity to be notified of product enhancements, upgrades, and other announcements. Registration is quick and easy at www.CPSww.com under "Support".

CyberPower International
Feel free to contact our Tech Support department with installation, troubleshooting, or general product questions.

CyberPower Systems, Inc.
Web: www.cpsww.com

CyberPower Systems (USA), Inc.
Phone: (952)403-9500 Toll-free: (877)297-6937
Email: tech@cpsww.com
Web: www.CPSww.com
Add: 4241 12th Avenue E., Suite 400 Shakopee, MN 55379
Hours of Operation: Monday-Friday 8:00 AM-5:00 PM (CST)

Limited Warranty
Read the following terms and conditions carefully before using the CyberPower ATS PDU series. By using the Product, you consent to be bound by and become a party to the terms and conditions of this Limited Warranty. If you do not agree to the terms and conditions of this Warranty, you should return the Product for a full refund prior to using it.

Who Is Providing This Warranty?
CyberPower Systems, Inc. provides this Limited Warranty.

What Does This Warranty Cover?
This warranty covers defects in materials and workmanship in the Product under normal use and conditions.

What Is The Period of Coverage?
CyberPower provides a 3-Year limited warranty to the original purchaser who owns the Product.

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Customer Service & Warranty

Who Is Covered?

This warranty only covers the original purchaser. Coverage ends if you sell or otherwise transfer the Product.

How Do You Get Service?

1. You can use the contact information mentioned above for instructions.
2. When you contact CyberPower, identify the Product, the Purchase Date, and the item(s) of Connected Equipment.
3. You must provide a purchase receipt (or other proof of the original purchase) and provide a description of the defect.

What Will We Do To Correct Problems?

CyberPower will inspect and examine the Product.
If the Product is defective in material or workmanship, CyberPower will repair or replace it at CyberPower's expense, or, if CyberPower is unable to or decides not to repair or replace the Product (if defective) within a reasonable time, CyberPower will refund to you the full purchase price you paid for the Product (purchase receipt showing price paid is required).

Who Pays for Shipping?

We pay when we send items to you; you pay when you send items to us.

What Are Some Things This Warranty Does Not Cover?

1. This Warranty does not cover any software that is damaged or needs to be replaced due to the failure of the Product or any data that is lost as a result of the failure or the restoration of data or records, or the reinstallation of software.
2. This Warranty does not cover or apply to: misuse, modification, operation or storage outside environmental limits of the Product or the equipment connected to it, nor for damage while in transit or in storage, nor if there has been improper operation or maintenance, or use with items not designed or intended for use with the Product, such as laser printers, appliances, aquariums, medical or life support devices, etc.

What Are The Limitations?

1. This Warranty does not apply unless the Product and the equipment that was connected to it were connected to properly wired and grounded outlets (including compliance with electrical and safety codes of the most current electrical code), without the use of any adapters or other connectors.
2. The Product must have been plugged directly into the power source and the equipment connected to the Product must be directly connected to the Product and not "daisy-chained" together in serial fashion with any extension cords, another Product or device similar to the Product, surge suppressor, or power tap. Any such installation voids the Limited Warranty.
3. The Product and equipment connected to it must have been used properly in a suitable and proper environment and in conformance with any license, instruction manual, or warnings provided with the Product and the equipment connected to it.
4. The Product must have been used at all times within the limitations on the Product's VA capacity.
5. The sole and exclusive remedies of the Initial Customer are those provided by this Warranty

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Appendix A-Hyper Terminal

Hyper Terminal software can be used for basic ATS PDU configuration. It utilizes a text-based interface and menu system. Navigation through the interface is done by typing the number of the menu option and pressing the Enter key.
Note: The session will timeout and logout after 3 minutes of inactivity. Menu options are shown below:

[Main Menu]
1. Utility Configuration
2. Outlet Manager (Switched Series Only)
3. Load Configuration
4. Network Settings
5. System Configuration
6. Account Settings
7. Configure System to Default
8. Logout

[Utility Configuration]
1. Preferred Source: A
2. Sensitivity: High
3. Voltage Range: Medium
4. Frequency Deviation: 1 Hz
5. Nominal Voltage: 230 V
6. Wide Voltage Range: 30 V
7. Medium Voltage Range: 23 V
8. Narrow Voltage Range: 16 V
9. Set Load Restriction

[Outlet Manager]
1. Outlet Control
2. Outlet Configuration

[Load Configuration]
1. Device Threshold Configuration
2. Bank 1 Threshold Configuration
3. Bank 2 Threshold Configuration
4. Bank 3 Threshold Configuration

[Network Setting]
Physical MAC Address: 00-0C-15-00-00-01
1. System IP: 192.168.20.240
2. Subnet Mask: 255.255.255.0
3. Default Gateway: 192.168.20.254
4. DHCP: Enabled
5. Http Port: 80
6. Http Access: Enabled

[System Configuration]
1. Name: PDU15SW10ATNET
2. Location: Server Room
3. Contact: Administrator

[Account Setting]
1. Administrator

[Configure System to Default]
Sure to Configure System to Default
1. Reset ATS
2. Reset ATS (TCP/IP Settings Reserved)

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Appendix B-Power Device Network Utility

Overview

The CyberPower Power Device Network Utility is an easy-to-use interface which is used for establishing IP addresses on CyberPower ATS PDUs.

Installation

Step 1. Insert the CD labeled “Software Installation CD” into the CD/DVD drive.

Step 2.Select Power Device Network Utility from the installation menu (Shown in Figure 1.).

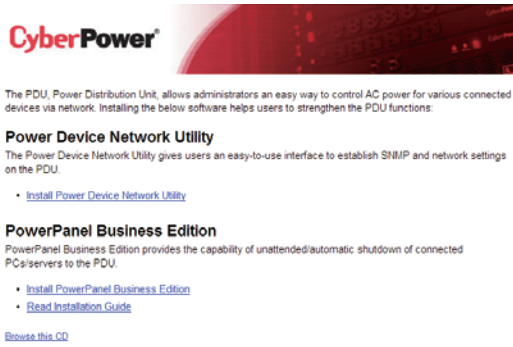
CyberPower
The PDU, Power Distribution Unit, allows administrators an easy way to control AC power for various connected devices via network. Installing the below software helps users to strengthen the PDU functions:
Power Device Network Utility
The Power Device Network Utility gives users an easy-to-use interface to establish SNMP and network settings on the PDU.
Install Power Device Network Utility
PowerPanel Business Edition
PowerPanel Business Edition provides the capability of unattended/automatic shutdown of connected PCs/servers to the PDU.
Install PowerPanel Business Edition
Read Installation Guide
Browse this CD

Figure 1. Installation Menu

Step 3. Select Next in the software wizard.

Step 4. Choose an installation directory and user settings.
Select Next (Shown in Figure 2.).

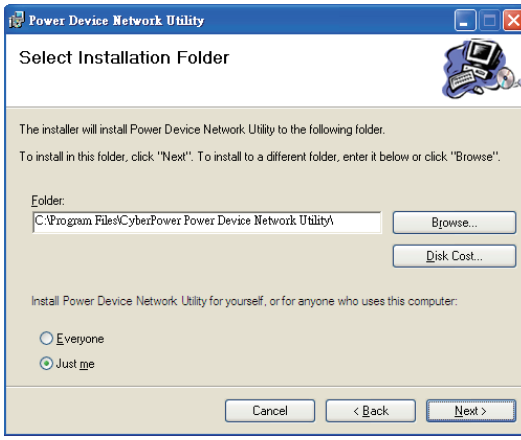
Power Device Network Utility
Select Installation Folder
The installer will install Power Device Network Utility to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files\CyberPower Power Device Network Utility\
Browse...
Disk Cost...
Install Power Device Network Utility for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

Figure 2. Installation folder and settings

Step 5. Select Next to comfirm the settings and install.

Step 6. Select Close to finalize the installation.

Launch Program

To launch the Power Device Network Utility and get started, select Programs from the Start menu in Windows and locate the new folder and icons for Power Device Network Utility. Select Power Device Network Utility from the program folder (Shown in Figure 3.).

Figure 3. Power Device Network Utility

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Appendix B-Power Device Network Utility

Getting Started

The Power Device Network Utility scans the network for devices with MAC addresses that match CyberPower network hardware. Once found, the device(s) can then be figured with a specific IP address, subnet mask, and gateway address. This allows the device(s) to function properly on the network and interface with CyberPower Management Console.

Step 1. Select the appropriate ATS PDU from the Equipment List (Shown in Figure 4.).

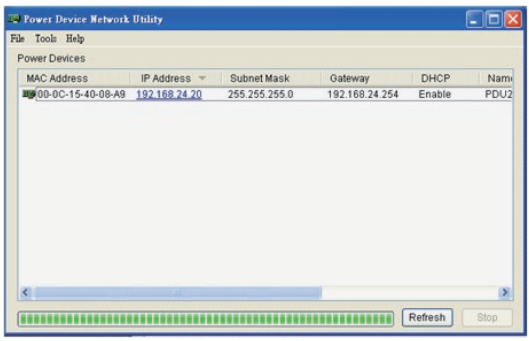

Figure 4. Equipment List

Note: If the ATS PDU does not appear on the list, click the Refresh button to rescan the network. If it still does not appear, ensure that the ATS PDU is turned on and is installed correctly.

Pressing Stop will cancel the scan/refresh process.

Note: If your computer has a software firewall installed, you may see a Windows Security Alert message (Shown in Figure 5.).

In Windows XP SP2, the default firewall alert message is shown as Figure 5. You need to allow the Power Device Network Utility access through the firewall.

Windows Security Alert
To help protect your computer, Windows Firewall has blocked some features of this program.
Do you want to keep blocking this program?
Name: Power Device Network Utility
Publisher: Unknown
Keep Blocking
Unblock
Ask Me Later
Windows Firewall has blocked this program from accepting connections from the Internet or a network. If you recognize the program or trust the publisher, you can unblock it. When should I unblock a program?

Figure 5. Windows Security Alert

Step 2. Assign a valid IP Address to the ATS PDU

With the appropriate device selected from the Equipment List, open the Network Settings menu (shown in Figure 6.) [Tools=>Device Setup]. In the Device Network Setting Menu, enter a valid IP address, subnet mask, and gateway address to setup the ATS device.

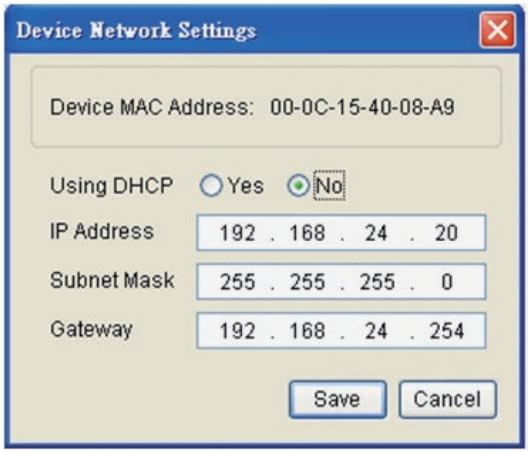

Figure 6. Network Setting Menu (Device Setup)

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Step 3. Authentication
Enter the user name and password of the ATS PDU at the Authentication menu (shown in Figure 7.)
Note: The default username is "**cyber**" and the default password is "**cyber**".

Figure 7. Authentication screen

Advanced Settings
Timeout Settings
The Timeout Setting (Shown in Figure 8.). [Edit=>Timeout Settings] is used to specify the wait time when scanning for network ATS PDUs. When there are many devices on the local network, it may take extended periods of time to locate all the devices. The timeout function is used to limit the search time.
The default setting is 3 seconds. Valid values are 3 to 60 seconds.

Figure 8. Timeout Setting

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K01-0000322-01